

Amendments to the Claims:

This listing of claims will replace all prior version, and listings, of claims in the application.

Listing of Claims:

Claim 1 (Canceled)

Claim 2 (Currently Amended): The longitudinal coupled multiple mode SAW filter according to claim 1, comprising

two reflectors disposed on both sides of a plurality of IDTs along the propagation direction of the surface wave, wherein

the reflectors reflect the surface wave and trap oscillation energy of the surface wave between them.

Claim 3 (Currently Amended): ~~The~~ A longitudinal coupled multiple mode SAW filter according to claim 1, comprising a plurality of IDTs disposed along a propagation direction of a surface wave on a piezoelectric substrate, wherein

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal, the other comb electrode of the middle IDT is grounded,

a comb electrode of the IDT on each side of the middle IDT is connected with an output terminal, the other comb electrodes of the side IDTs are grounded,

electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the IDT on one side make a connection between terminals or a connection between grounds and the other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection between a terminal and a ground, wherein

the width of adjacent electrode fingers of an input IDT and an output IDT is designed to be smaller than the width of the other electrode fingers.

Claim 4 (Currently Amended): The longitudinal coupled multiple mode SAW filter according to claim ~~1~~ 3, wherein

~~the width of adjacent electrode fingers of the input IDT and the output IDT is designed to be smaller than the width of the other electrode fingers, and~~

the pitch between adjacent electrode fingers of the input IDT and the output IDT and electrode fingers next to the adjacent electrode fingers is designed to be narrower than the pitch between the other electrode fingers.

Claim 5 (Original): The longitudinal coupled multiple mode SAW filter according to claim 4, wherein the width of a plurality of adjacent electrode fingers of the input IDT and the output IDT is designed to be smaller than the width of the other electrode fingers.

Claim 6 (Currently Amended): The longitudinal coupled multiple mode SAW filter according to claim ~~1~~ 3, wherein the output terminals are formed facing one direction.

Claim 7 (Currently Amended): ~~The~~ A longitudinal coupled multiple mode SAW filter according to claim ~~1~~, comprising a plurality of IDTs disposed along a propagation direction of a surface wave on a piezoelectric substrate, wherein

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal, the other comb electrode of the middle IDT is grounded,

a comb electrode of the IDT on each side of the middle IDT is connected with an output terminal, the other comb electrodes of the side IDTs are grounded,

electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the IDT on one side make a connection between terminals or a connection between grounds and the other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection between a terminal and a ground, wherein

the grounds are established facing one direction.

Claim 8 (Currently Amended): ~~The~~ A longitudinal coupled multiple mode SAW filter according to claim ~~1~~, comprising a plurality of IDTs disposed along a propagation direction of a surface wave on a piezoelectric substrate, wherein

U.S. Patent Application Serial No. **10/073,895**
Amendment Under 37 C.F.R. §1.111 dated September 8, 2003
Response to the First Rejection dated May 8, 2003

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal, the other comb electrode of the middle IDT is grounded,

a comb electrode of the IDT on each side of the middle IDT is connected with an output terminal, the other comb electrodes of the side IDTs are grounded,

electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the IDT on one side make a connection between terminals or a connection between grounds and the other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection between a terminal and a ground, wherein

the output terminals are mutually formed in opposite directions.

Claim 9 (Canceled)

Claim 10 (Currently Amended): The SAW filter according to claim 9 13, wherein the longitudinal coupled multiple mode SAW filter comprises two reflectors disposed on both sides of a plurality of IDTs along the propagation direction of the surface wave, and the reflectors reflect the surface wave and trap oscillation energy of the surface wave between them.

Claim 11 (Currently Amended): The SAW filter according to claim 9 13, wherein the resonator is a one-port resonator.

Claim 12 (Currently Amended): The SAW filter according to claim 9 13, wherein
the resonator comprises two reflectors for reflecting the surface acoustic wave disposed on
both sides of one or a plurality of IDTs along the propagation direction of the surface wave.

Claim 13 (Currently Amended): ~~The~~ A SAW filter ~~according to claim 9~~, comprising
a longitudinal coupled multiple mode SAW filter comprising a plurality of IDTs disposed
along a propagation direction of a surface wave on a piezoelectric substrate and
a resonator which includes one or a plurality of IDTs for exciting and receiving a surface
acoustic wave, has antiresonant frequency approximately equivalent to cut-off frequency on the
high-pass side of a pass-band of the longitudinal coupled multiple mode SAW filter and connects
with the longitudinal coupled multiple mode SAW filter in series, the longitudinal coupled multiple
SAW filter wherein

an IDT is flanked on either side by IDTs,
a comb electrode of the IDT in the middle is connected with an input terminal, the other
comb electrode of the middle IDT is grounded,

a comb electrode of the IDT on each side of the middle IDT is connected with an output
terminal, the other comb electrodes of the side IDTs are grounded,

electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the
IDT on one side make a connection between terminals or a connection between grounds and the
other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection

between a terminal and a ground, wherein

the width of adjacent electrode fingers of an input IDT and an output IDT in the longitudinal coupled multiple mode SAW filter is designed to be smaller than the width of the other electrode fingers.

Claim 14 (Currently Amended): The SAW filter according to claim 9 13, wherein
~~the width of adjacent electrode fingers of the input IDT and the output IDT in the longitudinal coupled multiple mode SAW filter is designed to be smaller than the width of the other electrode fingers, and the pitch between adjacent electrode fingers of the input IDT and the output IDT and electrode fingers next to adjacent the electrode fingers is designed to be narrower than the pitch~~
between the other electrode fingers.

Claim 15 (Original): The SAW filter according to claim 14, wherein the width of a plurality of adjacent electrode fingers of the input IDT and the output IDT is designed to be smaller than the width of the other electrode fingers.

Claim 16 (Currently Amended): The SAW filter according to claim 9 13, wherein
the output terminals are formed facing one direction.

Claim 17 (Currently Amended): ~~The~~ A SAW filter according to claim 9, comprising
a longitudinal coupled multiple mode SAW filter comprising a plurality of IDTs disposed
along a propagation direction of a surface wave on a piezoelectric substrate and
a resonator which includes one or a plurality of IDTs for exciting and receiving a surface
acoustic wave, has antiresonant frequency approximately equivalent to cut-off frequency on the
high-pass side of a pass-band of the longitudinal coupled multiple mode SAW filter and connects
with the longitudinal coupled multiple mode SAW filter in series, the longitudinal coupled multiple
SAW filter wherein
an IDT is flanked on either side by IDTs,
a comb electrode of the IDT in the middle is connected with an input terminal, the other
comb electrode of the middle IDT is grounded,
a comb electrode of the IDT on each side of the middle IDT is connected with an output
terminal, the other comb electrodes of the side IDTs are grounded,
electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the
IDT on one side make a connection between terminals or a connection between grounds and the
other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection
between a terminal and a ground, wherein
the grounds are established facing one direction.

Claim 18 (Currently Amended): ~~The A SAW filter according to claim 9, comprising~~
a longitudinal coupled multiple mode SAW filter comprising a plurality of IDTs disposed
along a propagation direction of a surface wave on a piezoelectric substrate and

a resonator which includes one or a plurality of IDTs for exciting and receiving a surface
acoustic wave, has antiresonant frequency approximately equivalent to cut-off frequency on the
high-pass side of a pass-band of the longitudinal coupled multiple mode SAW filter and connects
with the longitudinal coupled multiple mode SAW filter in series, the longitudinal coupled multiple
SAW filter wherein

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal, the other
comb electrode of the middle IDT is grounded,

a comb electrode of the IDT on each side of the middle IDT is connected with an output
terminal, the other comb electrodes of the side IDTs are grounded,

electrode fingers are so arranged that adjacent electrode fingers of the middle IDT and the
IDT on one side make a connection between terminals or a connection between grounds and the
other adjacent electrode fingers of the middle IDT and the IDT on the other side make a connection
between a terminal and a ground, wherein

the output terminals are mutually formed in the opposite directions.

Claim 19 (Original): A longitudinal coupled multiple mode SAW filter comprising a plurality of IDTs disposed along a propagation direction of a surface wave on a piezoelectric substrate, wherein

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal,

a comb electrode of the IDT on each side of the middle IDT is connected with an output terminal,

the width of adjacent electrode fingers of an input IDT and an output IDT is designed to be smaller than the width of the other electrode fingers.

Claim 20 (Original): A longitudinal coupled multiple mode SAW filter comprising a plurality of IDTs disposed along a propagation direction of a surface wave on a piezoelectric substrate, wherein

an IDT is flanked on either side by IDTs,

a comb electrode of the IDT in the middle is connected with an input terminal,

a comb electrode of the IDT on each side of the middle IDT is connected with an output terminal,

the width of adjacent electrode fingers of an input IDT and an output IDT is designed to be smaller than the width of the other electrode fingers and

the pitch between adjacent electrode fingers of the input IDT and the output IDT and

U.S. Patent Application Serial No. **10/073,895**
Amendment Under 37 C.F.R. §1.111 dated September 8, 2003
Response to the First Rejection dated May 8, 2003

electrode fingers next to the adjacent electrode fingers is designed to be narrower than the pitch between the other electrode fingers.

Claim 21 (Original): The longitudinal coupled multiple mode SAW filter according to claim 20, wherein

the width of a plurality of adjacent electrode fingers of the input IDT and the output IDT is designed to be smaller than the width of the other electrode fingers.

U.S. Patent Application Serial No. **10/073,895**
Amendment Under 37 C.F.R. §1.111 dated September 8, 2003
Response to the First Rejection dated May 8, 2003

Amendments to the Drawings:

The attached sheets of drawings includes changes to Figs. 22 - 25. These sheets, which includes Figs. 22 - 25, replaces the original sheets including Figs. 22 - 25. These Figures have been labeled as prior art in accordance with item 1, page 2 of the outstanding Office Action.